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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,152	09/29/2003	Ning Lei	13436.268 (Lei 1-1)	1904
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PATTON BOGGS LLP 1801 CALIFORNIA STREET SUITE 4900 DENVER, CO 80202			EXAMINER WONG, XAVIER S	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 07/12/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/674,152

Applicant(s)

LEI ET AL.

Examiner

Xavier Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

- ◆ Applicant's Amendment filed 7<sup>th</sup> May 2007 is acknowledged
- ◆ Claims 1 – 3 have been amended
- ◆ Claims 1 – 4 are still pending in the present application
- ◆ This action is made FINAL

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims **1** and **2** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cheng (U.S Patent 7,051,104 B1)** in view of **Dang et al (U.S Patent 7,035,209 B2)**.

Consider claim **1**, **Cheng** disclose a (data communication) system operating in ISDN data link layer protocols Q.921 (LAP-D) and Q.922 (LAP-F) that maintains active connection between two terminals/access nodes and that all switched virtual circuits (SVC) are still established during a down or re-initialization, which may include a *software reset* (column 5 lines 39-55). **Cheng** further discloses the exchange of ITU Q.921 and Q.922 request signals (e.g. TEI, SABME, AWAITING\_UA/DM, DL-ESTABLISH, DL-RELEASE, etc.) between a data terminal equipment (DCE) and a data communication equipment (DCE) to maintain a predetermined active call connection state (column 5 lines 26-55 & column 6 lines 25-30). However, **Cheng** may not have explicitly mentioned maintaining the presence of an active data link between the two nodes (ISDN Access Node & Terminal Equipment) and by forcing a predetermined data call to prevent interruption of the data link connection. In the same field of endeavor, **Dang et al** disclose a Control Network Automatic Creation – CNAC – process in each (terminal) node that can maintain data link connection between two nodes (therefore, maintaining a *presence* of data link) and replaces disrupted links using

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available bandwidth of in-band links (therefore, *forcing* a predetermined *active data call* connection) between the nodes (column 8 lines 65-67 & column 9 lines 1-3, claim 15; fig. 2). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of the presence of an active data link between the two nodes (ISDN Access Node & Terminal Equipment) and a predetermined data call to prevent interruption of the data link connection as taught by **Dang et al**, in the system of **Cheng**, in order to sustain network reliability.

Consider claim 2, and as applied to claim 1, **Cheng** as modified by **Dang et al** further disclose a sequence to respond to a DL-ESTABLISH (data link establish) request when a layer 2 device/terminal is down. Upon detection of a down, a device (switch A 110) will continue to assume that the link layer is still *active* and all the switched virtual circuits (SVC) that are previously (primitive) established were never released and still in operation (column 5 lines 39-55); therefore, a stable connection is preserved. The device/terminal performs a "sets layer 3 initiated" step to maintain layer 2 connection with layer 3 active as if *no disconnection* has ever occurred; and operated in a Q.922 (LAP-F) and Q.921 (LAP-D) in a layer 2 environments (column 5 lines 39-55, column 6 lines 15-30 & column 7 lines 57-62).

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cheng** (U.S Patent 7,051,104 B1) in view of **Dang et al** (U.S Patent 7,035,209 B2), and in further view of **Hatta** (U.S Patent 5,506,839).

Consider claim 3, and as applied to claim 2, **Cheng** as modified by **Dang et al** disclose the claimed invention except an RNR signal being transmitted to terminal equipment. In the same field of endeavor, **Hatta** clearly show and disclose an RNR signal transmission begins after the detection of a congestion notification bit being set to 1 to a data terminal equipment (column 5 lines 36-51 & column 10 lines 10-20; figs. 2c, 4 & 9). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the teachings of transmitting an RNR signal to a terminal equipment as taught by **Hatta**, in the system of **Cheng**, as modified by **Dang et al**, in order to detect a congestion is taking place.

Consider claim 4, and as applied to claim 3, **Cheng**, as modified by **Dang et al** and **Hatta**, clearly show and disclose the claimed invention except the software reset means comprise the disabling of the RNR signal transmission in response to completion of execution. **Hatta** further disclose in the recovery (a reset) steps, a terminal equipment, via a terminal adapter, learns the recovery occurrence by using a congestion notification bit in a control field of a register and a selector will select either Receive-Not-Ready (RNR) or Ready Receive (RR) signals (column 2 lines 51-60 & column 3 lines 35-55); in other words, only either RNR or RR signal can be transmitted at a certain timeframe (column 7 lines 62-66 & column 8 lines 1-7, 60-67; fig. 9). Therefore, when RR signal is being transmitted to the terminal equipment, RNR signal is disabled for transmission. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate the

teachings of disabling an RNR signal transmission in response to completion of a reset/recovery as taught by **Hatta**, in the system of **Cheng**, as modified by **Dang et al**, in order to begin data transmission without fault as soon as possible.

### ***Response to Arguments***

Applicants' arguments filed on 7<sup>th</sup> May 2007 with respect to claims 1 & 2 have been considered but are moot in view of the new grounds of rejection.

Applicants' arguments filed on 7<sup>th</sup> May 2007 with respect to claims 3 & 4 have been considered but are not persuasive. Considering claims 3 & 4, the applicants simply addressed that due to claims 3 & 4 are rejected in view of claims 1 & 2; therefore, claims 3 & 4 are also allowable. The applicants explain the invention of **Hatta** but did not specifically point out an argument for claims 3 & 4. In conclusion, since claims 1 & 2 are rejected using new prior art based on the applicants' amendment and claims 3 & 4 are dependent on claims 1 & 2, the rejection in view of **Hatta** is maintained.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xavier Szewai Wong whose telephone number is 571-270-1780. The examiner can normally be reached on Monday through Friday 8 am - 5 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Xavier Szewai Wong*  
X.S.W / x.s.w  
25<sup>th</sup> June 2007

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